

Geometry 11.1 Assignment: Angle Measures in a polygon (pp 661-668)

1. What is your name?

Find the sum of the measures of the interior angles of the convex polygon.

2. heptagon
gon

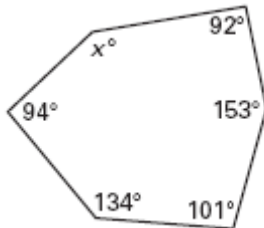
3. decagon

4. 16-

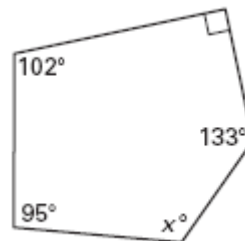
5. 24-gon

Find the value of x .

6.

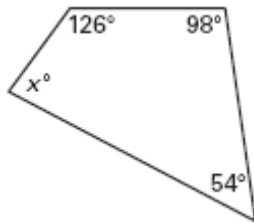


7.



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8. Find the value of x .



You are given the measure of each interior angle of a regular n -gon. Find the value of n .

9. 135°

10. 156°

11. 162°

12. $172\frac{4}{5}^\circ$

You are given the measure of each exterior angle of a regular n -gon. Find the value of n .

13. 40°

14. 36°

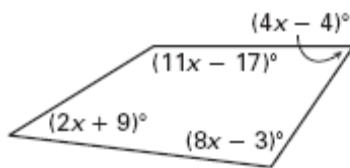
15. $7\frac{1}{2}^\circ$

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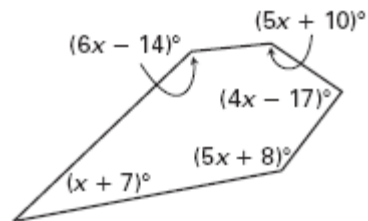
16. You are given the measure of an exterior angle of a regular n -gon. Find the value of n .

Find the value of x .

17.



18.



Would it be possible for a regular polygon to have interior angles with the angle measure described? Explain.

19. 155°

20. 160°

21. 165°

22. 168°

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Tell whether each statement is *always*, *sometimes*, or *never* true.

23. ____ As the number of sides of a polygon increases, the sum of the exterior angles decreases.

24. ____ An equilateral polygon is regular.

25. ____ If the number of sides of an equiangular polygon is doubled, the measure of each exterior angle is halved.

26. ____ The measure of an exterior angle of a decagon is greater than the measure of an exterior angle of a pentagon.

Review.

Find the area of the triangle described. *(Chapter 1 Section 7)*

27. base: 11 inches; height: 5 inches

28. base: 43 meters; height: 11 meters

29. vertices: $A(2, 0)$, $B(7, 0)$, $C(5, 15)$

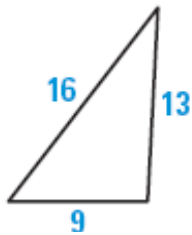
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30. Find the area of the triangle described. *(Chapter 1 Section 7)*

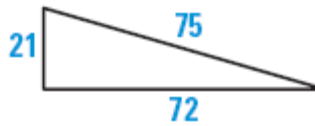
vertices: $D(-3, 3)$, $E(3, 3)$, $F(-7, 11)$

Tell whether the triangle is a right triangle. *(Chapter 9 Section 3)*

31.



32.



33.

